

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1(Canceled).

2(Currently Amended). The method compound according to claim 304, wherein R has an absorption wavelength of between 300 and 800nm.

3(Currently Amended). The compound method according to claim 304, wherein R is selected from the group consisting of chlorines, chlorophylls, coumarines, cyanines, fullerenes, metallophthalocyanines, metalloporphyrins, methylenporphyrins, naphthalimides, naphthalocyanines, nile blue, perylenequinones, phenols, pheophoribes, pheophyrins, phthalocyanines, porphycenes, porphyrins, psoralens, purpurins, quinines, retinols, rhodamines, thiophenes, verdins, xanthenes and dimers, oligomers and derivatives thereof.

4(Currently Amended). The compound method according to claim 304, wherein Q is selected from the group consisting of a non-fluorescing dye, a fluorophore, a second photosensitizing moiety, a nano-scaled semiconductor or conductor and gold.

5(Currently Amended). The compound method according to claim 4, wherein the said second photosensitizing moiety is different than R.

6(Currently Amended). The compound method according to claim 304, wherein X and Y are selected from the group consisting of complementary nucleic acid sequences, protein-ligand, antibody-antigen and protein-nucleic acid.

7(Currently Amended). The compound method according to claim 304, wherein the said linker moiety is selected from the group consisting of linear substituted alkyl, linear unsubstituted alkyl, branched substituted alkyl, branched unsubstituted alkyl, linear substituted heteroalkyl, linear unsubstituted heteroalkyl, branched substituted heteroalkyl, and branched substituted heteroalkyl groups.

8(Currently Amended). The compound method according to claim 304, wherein said molecule capable of producing free radicals is molecular oxygen.

9(Currently Amended). The compound method according to claim 8, wherein said free radicals are selected from the group consisting of singlet oxygen and reactive oxygen species.

10(Currently Amended). The compound method according to claim 304, wherein the said compound is unimolecular.

11(Currently Amended). The compound method according to claim 304, wherein the said compound is bimolecular.

12(Currently Amended). The method A complex comprising a compound according to claim 304, wherein said compound is in a complex, wherein said compound which is bound to a carrier which increases the internalization of said compound.

13(Currently Amended). The eoplex method according to claim 12, wherein said compound is bound to said carrier by electrostatic interaction or covalent interaction.

14(Currently Amended). The eoplex method according to claim 13, wherein the said carrier is a polycation.

15(Currently Amended). The eoplex method according to claim 14, wherein the said polycation is a histone or polylysine.

16(Currently Amended). The eoplex method according to claim 12, wherein said compound is bound to said carrier by covalent interaction.

17(Currently Amended). The eoplex method according to claim 13, wherein the said carrier is a protein or peptide.

18(Currently Amended). The eoplex method according to claim 17, wherein the said protein is an antibody, an antibody fragment, or a cholesterin.

19(Currently Amended). The eoplex method according to claim 12, wherein the said carrier targets a specific cell surface protein.

20(Currently Amended). The eoplex method according to claim 19, wherein the said specific cell surface protein is selected from the group consisting of a low-density lipoprotein receptor, an endothelial growth factor receptor, a fibroblast growth factor receptor, an integrin, an insulin receptor, an epidermal growth factor receptor and a transferrin receptor.

21(Currently Amended). The complex method according to claim 12, wherein the said complex is encapsulated in a lipid mixture, said lipid mixture comprising at least two members independently selected from the group consisting of phospholipids, sterols and cationic lipids.

22(Currently Amended). The complex method according to claim 21, wherein the said lipid mixture comprises liposomes.

23(Currently Amended). The complex method according to claim 22, wherein the said liposomes are from about 50 to 150 nm in diameter.

24(Currently Amended). The method A pharmaceutical composition comprising (a) a compound according to claim 304, wherein said compound is optionally bound to a carrier which increases the internalization of said compound and said incubating further comprises (b) at least one pharmaceutically acceptable carrier or excipient.

25-29(Canceled).

30(Currently Amended). A method of killing cells by photochemotherapy comprising the steps:

(i) incubating target cells with an effective amount of a compound according to claim 1 having a structure selected from the group consisting of X-R_n-A-Q_m-Y, R_n-X-A-Y-Q_m, R_n-X-A-Q_m-Y and X-R_n-A-Y-Q_m wherein,

A is a single-stranded nucleic acid sequence, said single-stranded nucleic acid sequence being complementary to a pre-selected target sequence;

R is a photosensitive moiety such that upon irradiation with electromagnetic radiation having a wavelength corresponding to at least one absorption

wavelength of R, R interacts through energy transfer with a molecule capable of producing free radicals, to produce free radicals;

Q is a moiety that quenches excited energy states of R;

X and Y are an affinity pair that interact to bring R and Q into close proximity in the absence of said target sequence thus enabling energy transfer between R and Q;

n and m are, independently, integers in the range 1-5; and

said compound optionally contains a linker moiety, optionally bound to a carrier which increases the internalization of said compound;

(ii) allowing sufficient time for the said compound to hybridise to a target nucleic acid sequence within the cells; and

(iii) irradiating the target cells with electromagnetic radiation of a wavelength that corresponds to at least one absorption wavelength of the photosensitive moiety R such that R interacts through energy transfer with a molecule capable of producing free radicals, to produce free radicals which kill said cells.

31(Previously Presented). The method according to claim 30, wherein said molecule capable of producing free radicals is molecular oxygen.

32(Previously Presented). The method according to claim 31, wherein said free radicals are selected from the group consisting of singlet oxygen and reactive oxygen species.

33(Previously Presented). The method according to claim 30, wherein irradiation with electromagnetic radiation is performed within between 1 minute and 168 hours after incubation with the compound.

34(Previously Presented). The method according to claim 30, wherein the total fluence of electromagnetic radiation used for irradiation is between 2 J/cm² and 500 J/cm².

35-36(Canceled).

37(Previously Presented). The method according to claim 30 which is useful for treating a patient suffering from a condition selected from the group consisting of neovascularization, age related macular degeneration, diabetic retinopathy, arthritis, and cancer.